Special Issue

Recent Advances and Perspectives of Fluorescent Biosensors

Message from the Guest Editors

Tools to elucidate biological phenomena have been regularly developed, especially in the last few decades. Fluorescent biosensors, as alternative approaches to omics studies, have been continuously developed alongside devices for quantitative detection of biomolecule dynamics. While various fluorescence measurement methods exist, such as intensity, polarization, lifetime, and correlation, most fluorescent biosensors are designed for target-specific applications in living cells. These biosensors provide amplifiable signals applicable in biological, medicinal, and clinical fields. They comprise fluorescent organic compounds, proteins, nanoparticles, and their combinations. Ongoing improvements aim to expand dynamic ranges, enhance selectivity, and improve sensitivity for monitoring. These advancements enable high-content imaging of cellular signaling and high-throughput screening for agonists or antagonists. This Special Issue seeks high-quality original research articles and comprehensive reviews in the field of fluorescent biosensors, particularly those focusing on new ideas and directions.

Guest Editors

Dr. Miho Suzuki

Faculty of Engineering, Department of Applied Chemistry, Saitama University, Saitama, Japan

Dr. Yutaka Shindo

Faculty of Science and Technology, Department of Biosciences and Informatics, Keio University, Tokyo, Japan

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Biosensors
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
biosensors@mdpi.com

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Message from the Editor-in-Chief

Biosensors is a leading journal, devoted to fast publication of the latest achievements, technological developments and scientific research in the exciting multidisciplinary area of biosensors. Both experimental and theoretical papers are published, including all aspects of biosensor design, technology, proof of concept and application. Special issues are devoted to specific technologies and applications, and a selection of the most outstanding papers each year is recognized. Pushing the boundaries of the discipline, we invite original papers, as well as timely reviews on cutting edge fields within the subject area.

Editor-in-Chief

Prof. Dr. Giovanna Marrazza
Department of Chemistry "Ugo Schiff", University of Florence, Via della Lastruccia 3, 50019 Sesto Fiorentino, Italy

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